

Resysta® Material Specification

No.	Properties	Test Method	Result
1	Density	ISO 1183	1.46 gm/cm ³
2	Hardness	ASTM D2240 : Shore D Hardness Test	88 Shore D
		Janka Hardness	13.07 kN / 2937 lbf
3	Flexural Properties	a) ASTM D790-03 Determination of Flexural Strength (Profile : 140mm x 38mm)	28.24 MPa
		b) ISO 178 Determination of Flexural Properties - Flexural Strength	46 MPa
		c) ISO 178 Determination of Flexural Properties - Flexural Modulus	3850 MPa
		d) ISO 178 Determination of Flexural Properties - Flexural Strength at Break	2.5%
4	Shear Strength	STMS-22774 Shear Strength (Profile : 140mm x 38mm)	12.82 MPa
5	Compressive Strength	ASTM D695-08 Compressive Strength (Profile : 140mm x 38mm)	39.4 MPa
6	End Bearing Test	End Bearing Test (Profile : 140mm x 38mm)	12,488 N
7	Nail Pull Off Test	STMS-2775 Nail Pull Off Test (Profile : 140mm x 38mm)	6009 N
8	Slip Resistance	a) ASTM - C1028-7 The Static Co-efficient of Friction Wet Condition Dry Condition	0.78 kgf 0.89 kgf
		b) ASTM E303: 1993 (2008) Skid Resistance Non Coated Vertical Horizontal Coated Vertical Horizontal	55 units 71 units 52 units 47 units
		c) AS 4586 : 2013 Appendix A - Wet Pendulum Test	P5
9	Resistance to Fungus/Bio Degredation	a) DINV ENV 12038 : 2002 - Durability of wood and wood-based products - wood based panels - Method of test for determining the resistance against wood-destroying basidiomycetes	No attack by fungi, highest durability Class 1
		b) CENT/TS 15083-2 - Determination of durability against rot fungi	No attack by fungi, highest durability Class 1
		c) ASTM D3273 - Resistance against mould and discolouring	Rating 1 - Resistant to infection of mould and discolouring
10	Fire Behaviour	a) DIN 4102 - 1 (May 1988) - Flammability (Building Material Class B1)	Class B1
		b) DIN EN 1350 - 1 : 2007 - Fire Classification of Construction Products and Building Elements - Part 1	Class E
		c) ASTM E84-09 - Surface Burning Characteristic of Building Materials	Class A
		d) BS 476 Part 6 : 1989 + A1 : 2009 - Fire Propagation Test Sub Index 1 Sub Index 2 Sub Index 3 Fire Propagation index I	1.01 0.89 0.47 2.37
		e) BS 476 Part 7: 1997 - Fire Classification	Class 1
		f) Building Regulation 2006 Approved Document B, UK Requirements : Propagation Index I <12 Sub Index <6	Class O
		g) ASTM E84-09 Surface Burning Characteristic of Building Materials (CP140)	Class A
		g) AS 1530.8.1 - 2007 - Bush Fire Test (Profile : 140mm x 25mm)	BAL A40

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11	Minimum Ignition Energy (MIE)	BS EN 13821 : 2001 - Determination of Minimum Ignition Energy (MIE)	
		ARF Raw Material	30 mJ to 100 mJ
		Resysta® Compound	> 1000 mJ
		Sanding Dust	> 1000 mJ
12	Chemical Analysis	a) RoHS Compliance Test	
		Cd (<100 ppm)	Not Detected
		Lead (<1000 ppm)	Not Detected
		Mercury (<1000 ppm)	Not Detected
		Hexavalent Chromium Cr+6	Not Detected
		b) Substance of Very High Concern (SVHC) Compliance - 53 substances <0.1% (REACH)	All Not Detectable
13	Accelerated Weathering	Xenon Arc Accelerated Weathering Test - QUV	
		a) 500, 1000, 1200, 1500 hours b) 2000 hours	Not Obvious Change Very Slight Change
14	Tensile Properties	a) ISO 527 - Determine of Tensile Properties - Maximum Tensile Strength	21.8 MPa
		b) ISO 527 - Determine of Tensile Properties - Elongation at Break	2.2%
		c) ISO 527 - Determine of Tensile Properties - Tensile Modulus	2,340 MPa
15	Impact Properties	ISO 180 - Determination of Izod Impact Strength	
		Notched, ISO 180/1eA Un-Notched ISO 180/1eU	2.65 kJ/m ² 5.99 kJ/m ²
16	Thermal Expansion Coefficient	ISO 11359 - Determination of Linear Thermal Expansion Coefficient	
		-20°C to +20°C +30°C to +70°C	0.425 mm/m/10°C 0.732 mm/m/10°C
17	Heat Deflection	ISO 75 - Determination of Heat Deflection Temperature	62 °C
18	Water Absorption	ISO 62 - Determination of Water Absorption	
		6 Hrs	0.73%
		32 Hrs	1.12%
		124 Hrs	1.85%

Note: Above values were determined in laboratory conditions using standard test specimens. This specification is intended to be used for general reference only and not for specification purposes. User will have to ascertain the suitability of the material for final application.